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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,348	01/15/2002	Gurtej S. Sandhu	MI22-1898	7554
21567	7590	02/07/2006	EXAMINER	
WELLS ST. JOHN P.S. 601 W. FIRST AVENUE, SUITE 1300 SPOKANE, WA 99201			SCHILLINGER, LAURA M	
			ART UNIT	PAPER NUMBER
			2813	

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,348

Applicant(s)

SANDHU ET AL.

Examiner

Laura M. Schillinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41-43, 48-52 is/are pending in the application.
- 4a) Of the above claim(s) 48-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 41-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/4/06.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Newly submitted claims 48-52 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 48-52 constitute as separate and distinct specie from that of originally elected claims 41-43.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 48-52 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 (41-43) are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma ('302).

Ma teaches the following claimed limitations as cited below:

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In reference to claim 1 (41) a device comprising:

A gate oxide layer (layers 1311 and 115) over a semiconductive substrate, the gate oxide layer comprising silicon dioxide and having a thickness of about 5A (Col.1, lines: 50-55- 0.5 nm =5 A); the gate oxide layer having a N-enriched region which is only in an upper half of the gate oxide layer (Fig.4 –SiN occurs in layer 1311 and not 115);

At least one conductive layer over the gate oxide layer (Col.2, lines: 5-15); and

Source/drain regions within the semiconductive substrate; the source/drain regions being gatedly connected to one another by the conductive layer (Col.2, lines: 10-15).

However, as Applicant points out in the arguments dated 10/19/05, the amended claim language specifies a total thickness of 5 A, therefore the minimum thickness taught by Ma would be 10 A, not 5 A as the amended claim language specifies. However, such a variation of thickness would have been obvious to one of ordinary skill in the art at the time of the invention to make the layer to a different thickness because as Ma teaches, “ the total thickness of composite gate dielectric 19 and the relative thicknesses of the dielectric sublayers may be adjusted by varying the oxidation time, temperature and gas partial pressure for individual components, 1311, 115, and 17.” (Col.2, lines: 14-20). Moreover, These claims are prima facie obvious without showing that the claimed ranges achieve unexpected results relative to the prior art range. In re Woodruff, 16 USPQ2d 1935, 1937 (Fed. Cir. 1990). See also In re Huang, 40 USPQ2d 1685, 1688(Fed. Cir. 1996)(claimed ranges of a result effective variable, which do not overlap the prior art ranges, are unpatentable unless they produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art). See also In re Boesch, 205 USPQ 215

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(CCPA) (discovery of optimum value of result effective variable in known process is ordinarily within skill of art) and In re Aller, 105 USPQ 233 (CCPA 1955) (selection of optimum ranges within prior art general conditions is obvious).

In reference to claim 2 (42) wherein the conductive layer comprises conductively doped silicon (Col.2, lines: 50-55).

In reference to claim 3 (43) wherein the conductive layer comprises p-type conductively doped silicon (boron is p- type; Col.2, lines: 50-55).

Response to Arguments

Applicant's arguments with respect to claims 41-43 have been considered but are moot in view of the new ground(s) of rejection.

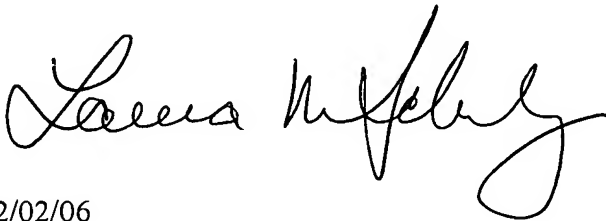
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M. Schillinger whose telephone number is (571) 272-1697. The examiner can normally be reached on M-T, R-F 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W. Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Laura M Schillinger". The signature is fluid and cursive, with the first name "Laura" being more legible than the last name "Schillinger".

Laura M Schillinger
Primary Examiner
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02/02/06